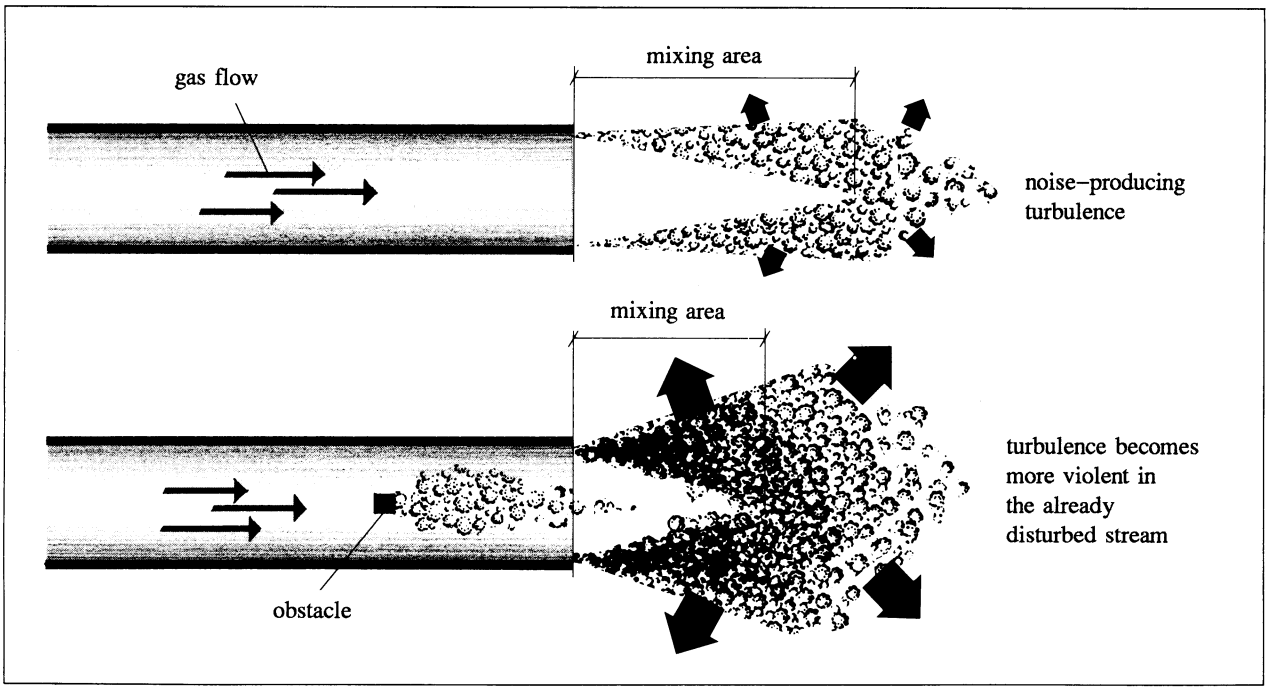
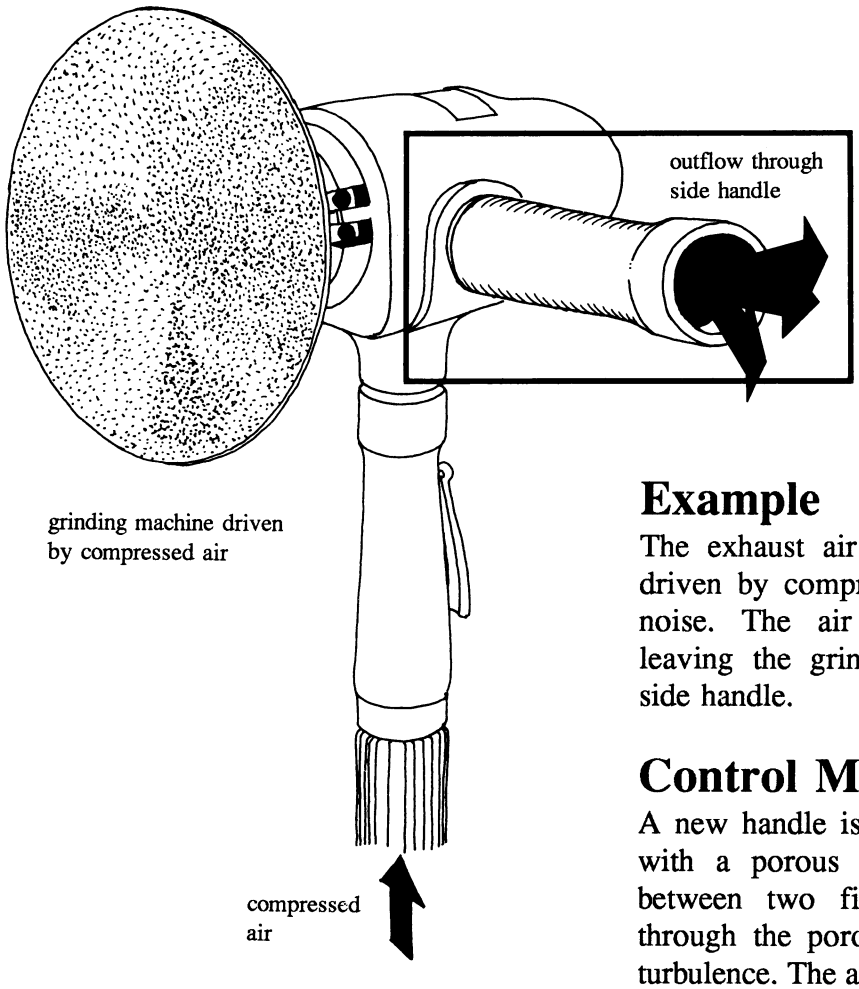
UNDISTURBED FLOW PRODUCES THE LEAST AMOUNT OF EXIT NOISE

When a flowing gas mixes with a non–moving gas, noise may be produced, especially if the flow is disturbed before it reaches the outlet. A lower exit speed will produce a lower sound level. For speeds below 100 meters/second, reduction of the speed by one–half results in a decrease in the noise level of about 15 dB.

Principle



Application of venting compressed air



Example

The exhaust air from a grinding machine driven by compressed air produces a loud noise. The air becomes turbulent upon leaving the grinding machine through the side handle.

Control Measure

A new handle is developed which is filled with a porous sound absorptive material between two fine–mesh gauzes. Passage through the porous material breaks up the turbulence. The air stream leaving the handle is less disturbed, and there is less exhaust noise. A straight lined muffler may also be used.